



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/027,013 | 12/21/2001 | Alan L. Rowe | 112056-0020 | 1131 |

24267 7590 11/19/2004

CESARI AND MCKENNA, LLP
88 BLACK FALCON AVENUE
BOSTON, MA 02210

| |
|----------|
| EXAMINER |
|----------|

PUENTE, EMERSON C

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2113

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------------------|-----------------------------|--|
| Office Action Summary | Application No. 10/027,013 | Applicant(s) ROWE ET AL. | |
| | Examiner Emerson C Puente | Art Unit 2113 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/8/02, 5/28/03, 7/30/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is made Non-Final. Claims 1-12 have been examined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-3 and 5-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,872,906 of Morita et al. referred hereinafter “Morita”.

In regards to claim 1 and 11, Morita discloses:

identifying a set of spare disks (see column 2 lines 33-46);

choosing a best spare disk of the set of spare disks (see column 2 lines 33-46); and

claiming ownership of the best spare disk (see column 2 lines 33-46);

In regards to claim 2, Morita discloses

choosing, in response to a failure of the step of claiming ownership, a next best spare disk of the spare disks available (see column 2 lines 33-46); and

claiming ownership of the next best spare disk (see column 2 lines 33-46);.

In regards to claim 3, Morita discloses

setting a first ownership attribute to a file server-owned state (see figure 7 and 8; column 8 lines 14-36 and column 9 lines 45-50);

setting a second ownership attribute to a file server-owned state (see figure 7 and 8; column 8 lines 14-36 and column 9 lines 45-50);

Art Unit: 2113

In regards to claim 5, Morita discloses
identifying all of the disks in the volume (see figure 7 and 8 and column 8 lines 14-36);
obtaining disk characteristics, respectfully, from all of the disks in the volume (see figure 7 and 8 and column 8 lines 14-36);
comparing the disk characteristics with a set of policies and characteristics of spare disks (see figure 14 and column 11 line 53 to column 12 line 24); and
alerting an administrator if a more optimal configuration is possible. Morita discloses if a notification of a device error such as a hard error or the like which cannot be recovered is received from the disk unit, the spare disk selection section (of the controller) selects a spare disk to replace it (see column 8 lines 37-48), thus indicating optimal configuration.

In regards to claim 6, Morita discloses
reconfiguring the disks into a more optimal configuration. Morita discloses, the spare disk selection section (of the controller) selects a spare disk to replace it (see column 8 lines 37-48), thus indicating reconfiguring the disks into a more optimal configuration.

In regards to claim 7, Morita discloses
selecting one or more disks from the set of spare disks that satisfy one or more rules (see figure 14 and column 11 line 53 to column 12 lines 23);
sorting the one or more disks using a set of ordered policies (see figure 14 and column 11 line 53 to column 12 lines 3);
if only one disk is highest-ranked, selecting the one disk that is highest-ranked as the best spare disk(see column 12 lines 3-7); and

Art Unit: 2113

if a plurality of disks are highest-ranked, selecting one disks from the plurality of disks that are highest ranks as the best spare disk. Morita discloses two or more disks can be provided per rank (see column 13 lines 24-25). If there are two per rank, then one has to be selected as the best spare disk.

In regards to claim 8, Morita discloses

one or more switches. Morita discloses switching to a spare to replace a failed disk (see column 1 lines 63 to column 2 line 2). Thus there must be one or more switches to switch between the disks;

a plurality of spare disks operatively interconnected through at least one of the switches (see column 2 lines 33-37);

one or more file servers operatively interconnected to at least one of the switches, each of the file servers including means for allocating one of the plurality of spare disks (see figure 4 and column 6 lines 17-36 and column 8 lines 37-51).

In regards to claim 9, Morita discloses

means for identifying the plurality of spare disks (see column 2 lines 33-46);

means for selecting a best spare disk from the plurality of spare disks (see column 2 lines 33-46); and

means for claiming ownership of the best spare disk (see column 2 lines 33-46).

In regards to claim 10, Morita discloses

means for selecting a set of disks from the plurality of spare disks that satisfy one or more rules (see figure 14 and column 11 line 53 to column 12 line 23);

means for sorting the set of disks according to a set of ordered policies (see figure 14 and column 11 line 53 to column 12 line 3); and

means for selecting a highest-ranked disk from the set of disks (see column 12 lines 3-7);

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morita.

In regards to claim 4 and 12, Morita discloses

selecting one or more disks from the set of spare disks that satisfy one or more rules (see figure 14 and column 11 line 53 to column 12 line 23);

sorting the one or more disks selected from the set of spare disks according to a set of ordered policies to identify a highest-ranked disk (see figure 14 and column 11 line 53 to column 12 line 3);

choosing a highest-ranked disk as the best spare disk (see column 12 lines 3-7); and

choosing, in response to more than one of the one or more disks being highest-ranked, one disk, from the more than one of the one or more disks that are highest-ranked, as the best spare disk. Morita discloses two or more disks can be provided per rank (see column 13 lines 24-25). If there are two per rank, then one has to be selected as the best spare disk.

Art Unit: 2113

However, Morita fails to explicitly disclose choosing at random. "Official Notice" is taken that the concept of choosing at random. It would have been obvious to one of ordinary skill in the art at the time the invention was made to choose at random. A person of ordinary skill in the art at the time of the invention would have been motivated because Morita discloses selecting one disk, from the more than one of the one or more disks that are highest-ranked, as the best spare disk, and selecting at random, is well known and used means of selecting.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emerson C Puente whose telephone number is (571) 272-3652. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ecp


ROBERT BEAUSOLIEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100